Appendix 1

ACCESS REFORM INDUSTRY IMPACTS

New Universal Service Funding

Background

Prior to January 1, 1998, the interexchange carriers (IXCs) supported the Universal Service Fund through an assessment of 53¢ per presubscribed customer. The Fund consisted of $826 million in high cost support and $167 million in low income/lifeline support. On January 1, 1998 the fund size increased due to the addition of new programs (schools, libraries and rural health care) and the expansion of existing low income and high cost programs. In addition, funding shifted to all telecommunication carriers with contributions based on retail revenues.

Since the contribution base differs between the funds, the funding requirements were determined by first estimating fund size and then applying the respective percentage shares between ILECs, IXCs and the Other categories (wireless, CLECs, etc.)

Schools/Libraries/Rural Healthcare

The Schools and Libraries were capped at $625 million for the first half-year while Rural Healthcare is capped at $50 million. This yields an annual fund of $1,300 million. This fund is allocated among all carriers by total retail revenues. Preliminary figures allocate this fund by 42.6% to IXCs, 41.1% to ILECs and 16.3% to the Other category (See Attachment A).

High Cost/Lifeline

The Lifeline fund is estimated at an annual level of $501.2 million and the High Cost at $434.1 million for the first quarter or $1,736.4 for the year. Thus, the combined Lifeline and High Cost will be approximately $2,236 million. This fund is allocated using only interstate retail revenues. Preliminary figures allocate this fund by 81.7% to IXCs, 13.7% to ILECs and 4.7% to the other category (Also Attachment A).

The fund contributions are shown in the Access Reform Industry Impacts chart (Chart 2).

Old Universal Service Fund

To determine the additional impact that occurred on January 1, the IXCs column also shows the offset caused by the elimination of the Old Universal Service Fund of $993 million. Since Long Term Support and Dial Equipment Minutes (DEM) support were paid to the ILECs by the IXCs as part of their access charges those offsets are not shown as part of Universal Service Funding but are included in Access Rates.

ACCESS REFORM INDUSTRY IMPACTS

Subscriber Line Charge (SLC) Increases

Background

On January 1, 1998, Price Cap ILECs increased their multiline business SLCs to reflect the new FCC rules. This change substantially increased the amounts recovered through multiline business SLCs. In addition, a new SLC cap for additional residence lines was introduced which increased the $3.50 cap to $5.00 for such lines.

These increases were offset by reductions in the per minute access charges. The $831 million SLC Increase (Chart 2) represents the "roll-up" for the Price Cap ILECs adjusted to reflect historical growth rates. (Attachment B, line 3. The "roll-up" reflects 1996 base period demand. For this analysis adjustments were made to reflect historical growth rates of 3% for lines and 6% for usage.) Since not all ILECs raised their SLC rates to the maximum allowed by the rules, the actual per minute access charge reduction related to SLC increases was approximately $110 million greater than the $831 million.

ACCESS REFORM INDUSTRY IMPACTS

Access Rates

Background

On January 1, 1998 the ILEC industry implemented major revisions of their access rates to IXCs. For Price Cap ILECs, changes included both Universal Service and Access Reform. The revisions contained in the FCC's May Access Reform Order included the introduction of the Presubscribed Interexchange Carrier Charge (PICC), increased SLCs and major reductions in the per minute access rates. For Rate of Return ILECs, the only revisions were for the Universal Service Fund. To estimate the industry impacts we first looked at the Price Cap ILECs.

Analysis

The table on Attachment B indicates that the industry "roll-up" of the Price Cap ILECs' December filing resulted in usage decreases of $2,771 million with increases of $104 million for "Other Trunking" and $1,845 million in PICC charges, for a net reduction of $822 million.

"Other Trunking," Attachment B, represents primarily Special Access rates and the rates for trunking between the ILECs' switches and IXCs' points of presence (POPs). Since part of the Special Access increase represents a Universal Service Fund (USF) flow through to end user customers, this part must be removed to determine the impact on the IXCs. Attachment C represents the Price Cap ILEC "roll-up" of the USF exogenous cost adjustments. This indicates that the Price Cap ILEC USF exogenous adjustment totaled $813 million, or 92.3% of the total ILEC USF contribution of $841M.

Of the USF exogenous adjustments, about $65 million affected the Special Access rates. Based upon Bell Atlantic data, approximately one-third of the $65 million affected end user prices with the remainder flowing to IXC rates. The $30 million adjustment to the ILECs' Toll Rates reflected potential increases to these rates that would affect end users and not the IXCs. This implies that only $78 million of the Other Trunking increase affected the IXC industry with $44 million being related to the USF flow through. The remaining $34 million increase would then be related to access reform. The remaining USF adjustment of about $717 million [813-65-30~717] affected the Common Line Basket and is reflected, for purposes of this analysis, in the usage category.

Having accounted for the USF flow through, the remaining issue is to look at the access reform impact on the Price Cap ILECs' usage rates. The overall reduction of $2,770 million includes both access reform and the elimination of Long Term Support (LTS) and Dial Equipment Minute Support (DEM). Total LTS was estimated at $471 million and total DEM at $433 million. Although a small part of LTS is related to Non-Price Cap ILECs, for simplicity we will assume the total LTS was removed from the Price Cap ILEC's rates. Approximately $50 million of DEM should have been removed from Price Cap ILECs for those study areas less than 50,000 lines.

The analysis above is based on the Price Cap ILECs January 1, 1998 tariff filings. The revenue data in these tariffs is developed from "1996 base period demand." Therefore, to obtain a current impact, based on expected 1998 demand, we have grown the usage revenues by 6% per year and

the PICCs revenue by 3% per year for 1997 and 1998. These growth rates reflect the ILECs average growth in minutes (6%) and lines (3%) over the past few years. In addition, the PICCs impact to the IXCs was corrected to reflect that approximately 5% of the ILEC's access lines are not presubscribed to an IXC and, therefore, the ILEC would charge the end user customer the PICC.

This results in the following for Price Cap ILECs:

Price Cap ILECs Access Charges to IXCs
January 1, 1998
$ Millions

Usage	
LTS & DEM	(585)
Access Reform	(3,289)
USF Flow through	761
PICCs	
Access Reform	1859
Other Trunking	
Access Reform	34
USF Flow through	44
TOTAL	(1,176)

(See Attachment D for further supporting documentation on USF flow through.)
(Usage and PICCs have been grown to represent 1998 demand.)

Correcting these numbers to reflect the total ILEC industry can be accomplished with a few additions. Since the rate of return ILECs did not implement access reform, they do not have PICCs and therefore the PICCs numbers represent the ILEC industry. The LTS and DEM reduction needs to be increased from $585 million to $1,016 million. Since DEM was in the local switching rate, this reflects usage reductions.

The total USF ILEC contribution of $841 million consisted of $813 million from Price Cap ILECs (previously identified as the USF exogenous cost adjustment) and $28 million from rate of return ILECs. A conservative assumption is that 100% of the rate of return ILECs' amount was recovered from the IXCs in usage rates. The results of these additions are shown in the "LECs" column of the Access Reform Industry Impacts (Chart 2) and imply that on January 1, 1998 the ILECs reduced their access charges a total of $1,576 million to the IXCs. (The USF flow through of $28M from the rate of return ILECs is combined with the $717M from the price cap ILECs (Attachment D, lines 3 and 7, current 1998 demand revenues are reflected on lines 14 and 15) and shown on Chart 2 in the usage category.)

Netting this reduction against the IXCs increased USF costs results in a total cost decrease of $190 million to the IXCs.

UNIVERSAL SERVICE FUND OBLIGATIONS
INDUSTRY DISTRIBUTION
($M)

	Total	LECs	IXCs	Other
Schools & Libraries	$ 1,300	$ 535	$ 554	$ 212
High Cost & Lifeline	$ 2,236	$ 306	$ 1,826	$ 104
Sub Total	$ 3,536	$ 841	$ 2,379	$ 316
Eliminate Old Fund	$ (993)		$ (993)	
Net Impact	$ 2,543	$ 841	$ 1,386	$ 316

Attachment A

Summary of Access Reform Price Cap Revenue Impacts by Customer Type
Interstate Access (filings through 2/27/98)
For All Price Cap LECs

Line		Current	Proposed	Based on 1996 Demand Revenue Delta	% Change		
	End User Charges						
1	EUCL	$7,535,437,700	$7,723,678,793	$188,241,093	2.50%		
2	(+) Marketing CL	$0	$595,137,209	$595,137,209	N/A		
3	(=) Total	$7,535,437,700	$8,318,816,002	$783,378,302	10.40%		
	Carrier Charges						
4	CL PICC	$0	$1,758,794,405	$1,758,794,405	N/A		
5	(+) CL MOU	$3,300,767,566	$1,563,095,977	($1,737,671,589)	-52.64%		
6	(+) TS Switched	$4,581,919,761	$4,043,890,844	($538,028,917)	-11.74%		
7	(+) TIC PICC	$0	$79,263,032	$79,263,032	N/A		
8	(+) TIC MOU	$1,738,709,526	$1,111,241,583	($627,467,943)	-36.09%		
9	(+) Other Trkng	$4,395,865,449	$4,499,889,222	$104,023,773	2.37%		
10	(+) Marketing PICC	$0	$6,860,526	$6,860,526	N/A		
11	(+) Marketing MOU	$0	$132,291,475	$132,291,475	N/A		
	(=) Total	$14,017,262,302	$13,195,327,064	($821,935,238)	-5.86%		
12	Total	$21,552,700,002	$21,514,143,066	($38,556,936)	-0.18%		
							Impact of
				Based on Tariff Filing	Based on Estimate	Growth	5%
	Summary of Carrier Charges			Demand (1996 Base)	of 1998 Demand	Rate	No-PICC
13	Total Usage	$9,621,396,853	$6,850,519,879	**($2,770,876,974)**	($3,113,357,367.99)	6.0%	**($3,113,357,368)**
14	Total PICC	$0	$1,844,917,963	**$1,844,917,963**	$1,957,273,466.95	3.0%	**$1,869,409,794**
15	Other Trunking	$4,395,865,449	$4,499,889,222	**$104,023,773**	$104,023,773.00		**$104,023,773**
16	Total	$14,017,262,302	$13,195,327,064	**($821,935,238)**	**($1,052,060,128)**		**($1,149,923,801)**

Source: Bellcore rerelease of rollup of price cap revenue deltas from 12/17/97 midyear filing (2/27/98)

Attachment B

PRICE CAP LEC UNIVERSAL SERVICE DISTRIBUTION

	Source	AMTR	BATR	BSTR	CBTC	CTTC**	GCTC	ALIANT	NXTR	SUB TOTAL
Common Line	TRP EXG-1 LN160	$85,800,183	$81,688,953	$105,056,102	$4,454,856	$1,460,411	$87,869,127	$913,692	$83,766,975	$451,010,299
Trunking	TRP EXG-1 LN560	$245,903	$14,283,762	$6,377,630	$0	$625,751	$1,053,201	$301,654	$14,696,550	$37,584,451
Interexchange	TRP EXG-1 LN760	$8,169,427	$8,306,835	$1,690,430	$180,790	$628,761	$1,357,197	$2,228	$1,725,748	$22,061,416
LEC Totals		$94,215,513	$104,279,550	$113,124,162	$4,635,646	$2,714,923	$90,279,525	$1,217,574	$100,189,273	$510,656,166

	Source	PA-CA	PA-NV	FRONTIER	CONTEL	SNCT	SWBT	USWEST	SPRINT	SUB TOTAL
Common Line	TRP EXG-1 LN160	$77,048,107	$1,202,639	$3,033,003	$13,909,454	$9,321,705	$68,027,414	$63,651,130	$29,895,406	$266,088,858
Trunking	TRP EXG-1 LN560	$6,021,018	$125,836	$154,250	$148,122	$560,536	$12,125,501	$7,146,714	$1,601,897	$27,883,874
Interexchange	TRP EXG-1	$0	$4,152	$0	$1,293,677	$0	$2,455,286	$3,569,639	$647,275	$7,970,029
LEC Totals		$83,069,125	$1,332,627	$3,187,253	$15,351,253	$9,882,241	$82,608,201	$74,367,483	$32,144,578	$301,942,761
Total All Companies										$812,598,927

Totals		% of Total	% to IXCs
Common Line	$717,099,157	88.2%	88.2%
Trunking	$65,468,325	8.1%	5.4%
Interexchange	$30,031,445	3.7%	0.0%
	$812,598,927	100.0%	93.6%

Source: Bellcore roll-up 12/23/97

Attachment C

UNIVERSAL SERVICE FLOW THROUGH

Line	Item	Reference	Amount
1	LEC USF	USF Obligation (Attachment A)	$ 841
2	Price Cap USF	Price Cap LEC USF Roll-Up (Attachment C)	$ 813
3	Non Price Cap LEC USF	L1 - L2	$ 28
4	% LEC USF to IXCs	Attachment C	93.6%
5	LEC USF to IXCs	L4 * L2	$ 761
6	% LEC USF to PICC	Attachment C	88.2%
7	LEC USF to PICC	L6 * L2	$ 717
8	% LEC USF to Other Trunking	Attachment C	8.1%
9	LEC USF to Other Trunking	L8 * L2	$ 65
9a	LEC USF in Other Trunking to IXCs	L9 * 2/3	$ 44
9b	LEC USF in Other Trunking to Consumers	L9 * 1/3	$ 22
10	% LEC USF to Toll Rates	Attachment C	3.7%
11	LEC USF to Toll Rates	L10 * L2	$ 30
12	Total USF Flow Through to IXCs	L3 + L7 + L9A	$ 789
13	Total USF Flow Through to Consumers	L9B + L11	$ 52
	Growth of USF Flow Through to IXCs		
14	Growth of Non Price Cap LEC USFat 6%/year	L3*1.06*1.06	$ 31
15	Growth of LEC USF to PICC at 3%/year	L7*1.03*1.03	$ 761
16	Total	L14 + L15	$ 792

Attachment D

Appendix 2

IXC Impacts of Access Reform
Estimated IXC Revenue From Pass Through Charges

Attachment E attempts to estimate the potential revenues the IXCs could obtain from the new IXC pass through charges that we are aware of today.

The SLC annual demand data were obtained from a roll up of the price cap ILECs' 1998 filings. Since only the price cap ILEC's demand is included, this is a conservative demand count. The price cap ILECs represent about 93% of total ILEC demand.

The number of single line business lines was estimated as approximately 5% of total single lines.

We also made a conservative estimate that only about 50% of multiline business lines would be billed the new per line charges, since some IXC tariffs indicated this charge would be applied per location rather than per line.

By using these assumptions and per line rates, the annual revenue the IXCs could obtain was calculated by multiplying the rate times the demand.

The IXCs have also tariffed new Universal Service Surcharges of between 4.4% to 5.0% applied to total billed revenue of only business customers. To determine the amount of revenue the IXCs may obtain from this charge we first estimated the amount of interstate and international retail revenue the IXCs earned in 1997 from the Telecommunications Relay Service report. And then we estimated the percentage of this revenue that was earned from business customers, by using a factor (about 43%) obtained from AT&T's 1997 fourth quarter report.

The Universal Service Surcharge revenue was then estimated by multiplying total revenue by 50% then by the 4.8% surcharge which is the weighted average of the three large IXCs' surcharges.

IXC Impacts of Access Reform
Estimated Revenue From Pass Through Charges

PICC Pass Through		1996 Base Period Annual PIC'd SLC Demand*	IXC Charge		Revenue
Residence Accounts**		1,196,054,506	$0.96	***	**$1,145,095,845**
SL Business	(Estimated 5% Primary SL)	59,802,725	$0.53		**$31,695,444**
ML Business	(Includes PRI-ISDN)	517,752,826			
Application Assumption	75% of Lines	388,314,619	$2.75		$1,067,865,203
Application Assumption	**50% of Lines**	**258,876,413**	**$2.75**		**$711,910,135**
Application Assumption	25% of Lines	129,438,206	$2.75		$355,955,068
Non-Primary Residence	(Includes BRI-ISDN)	102,205,938			
Business Surcharge					
Estimate of 1997 IXC USF Interstate/International Retail Revenue	**IXC % Business Revenues******	**Weighted Average Surcharge**	**Application Assumption**		**Revenue**
$58,000,000,000	43.2%	4.8%	75%		$911,213,493
$58,000,000,000	**43.2%**	**4.8%**	**50%**		**$607,475,662**
$58,000,000,000	43.2%	4.8%	25.0%		$303,737,831
Total New Revenue					**$2,496,177,087**

* Obtained from USTA rollup of Price Cap LEC 1/1/98 Tariffs. Lines corrected for growth of 3% per year and 5% no-PIC.

** Residence accounts assumed equal to primary residence lines. IXC account charge equals the weighted average by market share of AT&T's $0.95, MCI's $1.07 and Sprint's $0.80. PSL market share from FCC Report SOCC, rel. 12/97.

*** Rate equals weighted average rate of the three big IXCs.

**** Estimate of IXC retail revenue earned from business customers based on AT&T's 1/26/98 fourth quarter report. Total QTR rev = $12.828B, business = $5.543B, Business = 43.2%.

Attachment E

EXHIBIT 2

BEFORE THE

FEDERAL COMMUNICATIONS COMMISSION

WASHINGTON, D.C. 20554

In the Matter of	)	
	)	
MCI Telecommunications Corp.	)	
	)	**CCB/CPD 98-12**
Petition for Prescription of Tariffs	)	
Implementing Access Charge Reform	)	

AFFIDAVIT OF WILLIAM E. TAYLOR

I. INTRODUCTION

I, William E. Taylor, being duly sworn, depose and say:

1. I am Senior Vice President of National Economic Research Associates, Inc. (NERA), head of its telecommunications economics practice and head of its Cambridge office. I received a B.A. degree in economics, magna cum laude, from Harvard College in 1968, a master's degree in statistics from the University of California at Berkeley in 1970, and a Ph.D. in Economics from Berkeley in 1974, specializing in industrial organization and econometrics. I have taught and published research in the areas of microeconomics, theoretical and applied econometrics, and telecommunications policy at academic institutions (including the economics departments of Cornell University, the Catholic University of Louvain in Belgium, and the Massachusetts Institute of Technology) and at research organizations in the telecommunications industry (including Bell Laboratories and Bell Communications Research, Inc.). I have participated in telecommunications regulatory proceedings before state public service commissions, the Federal Communications Commission, the Department of Justice and the Canadian Radio-Television and Telecommunications Commission concerning competition, incentive regulation, price cap regulation, productivity, access charges, telecommunications mergers, pricing for

economic efficiency, and cost allocation methods for joint supply of video, voice and data services on broadband networks.

2. My articles have appeared in numerous telecommunications industry publications as well as *Econometrica*, the *American Economic Review*, the *International Economic Review*, the *Journal of Econometrics*, *Econometric Reviews*, the *Antitrust Law Journal*, *The Review of Industrial Organization*, and *The Encyclopedia of Statistical Sciences*. I have served as a referee for these journals (and others) and the National Science Foundation, as an Associate Editor of the Journal of Econometrics, and as a commentator on the PBS Nightly News Hour.

3. I prepared this affidavit at the request of Bell Atlantic in response to MCI's Emergency Petition for Prescription.[1] MCI repeats its complaints against carrier access charges that are set above incremental cost, asserts that competition will not reduce access charges at the rate contemplated by the Commission and insists that MCI has more than passed through access charge reductions in lower long distance rates. These claims have been aired at every regulatory outing in which MCI has participated, and mere repetition makes them no more true today than they were five years ago. The facts are:

- that MCI—and AT&T and Sprint—have failed to pass through access charge reductions in lower prices as customers would expect in an effectively competitive market; and

- that carrier access charges exceed incremental cost, but those charges have no anticompetitive effect in the intraLATA market (where Bell Atlantic and the IXCs compete) or the interLATA market (where only the IXCs are currently permitted to participate).

Indeed, if the long distance market were effectively competitive and reductions in access charges were passed through by market forces, there would be no reason for MCI to carry on its access charge crusade; a far more likely circumstance—inadvertently acknowledged in its

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[1] *In the Matter of Tariffs Implementing Access Charge Reform*, CC Docket No. 97-250, MCI Emergency Petition for Prescription, February 24, 1998, ("Petition").

Petition—is that MCI intends to profit from future access charge reductions as it clearly has profited from access charge reductions in the past.

II. MCI'S EXPLANATION OF ITS PRICE CHANGES IS WRONG.

A. MCI's illustrations of pricing behavior show why average revenue per minute cannot be used to measure the flow-through of carrier access charges.

4. MCI claims that it has made significant reductions in per-minute charges to offset implementation of primary interexchange carrier charges (PICC)s. It points to a number of actions that it has taken, including its 5-Cents Sunday plan, new product offerings and customer migration to lower-rate products. According to statements made by MCI, much of the putative reduction in its per-minute long distance prices in 1997 was due to its 5-Cents Sunday plan.[2] For a number of reasons described below, it is highly misleading to point to reductions in customer's bills resulting from marketing plans—which are primarily due to market forces and would likely have taken place *independent* of access reductions—as being the result of a pass-through of access charges. When alleged price reductions are viewed in the context of what would have happened independent of access reductions, it becomes clear that MCI failed to live up to its promise of passing through every penny of access reductions arising from access reform.

5. First, a fundamental error that MCI makes throughout its Petition is its inability to distinguish changes in *price* from changes in revenue brought about by other effects. MCI has consistently maintained that it has more than passed through access charge reductions to end users. In its Petition, it proudly states:

> Many customers have reduced their long distance costs even more dramatically, by shifting from basic rates to the heavily promoted MCI One, or moving more of their

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[2] See MCI letter from John B. Sallet to Chairman William E. Kennard, March 2, 1998 ("Sallet letter").

> calling to Sunday...The bottom line is that users of MCI services are buying cheaper minutes of long distance than they were a year ago.[3]

Movement of customers from basic rates to a discount plan or from weekday calling to Sunday calling does *not* constitute a reduction in price. It is possible that MCI could have *raised* the price of every service (basic and discount, weekday and Sunday) while MCI average revenue per minute ("ARPM") could still have fallen, if enough customers switch from the highest priced services. In fact, as AT&T and MCI basic service prices have increased, the price of most discounted services has increased as well, since most discounted services are priced at a fixed percentage discount off the basic price. Two additional examples further illustrate the deficiencies when using ARPM:

- Suppose that MCI customers demand ten minutes of message toll service (MTS) for each minute of wide area toll service (WATS) and that the price per minute of MTS is twice that of WATS. If MTS and WATS prices both increase by 1 percent but demand for WATS grows at 50 percent per year while MTS demand grows at 10 percent per year, then the ARPM of usage decreases by about one half a percent. In other words, ARPM declines despite the fact that both of the component usage prices have increased.

- Suppose that MCI increases private line rates while holding toll rates constant. Then large customers will shift from private line services to volume-discounted toll services. This shift will reduce the ARPM of toll services even though the price of toll service was unchanged and that of another service increased.

6. The important economic dispute is whether the pass-through of access charge reductions should be measured by reductions in ARPM or reductions in price. MCI clearly believes that if enough customers shift their calling to Sundays, its obligation to pass through access charge reductions will be fulfilled without the need for it to reduce any price. To settle this dispute, it is instructive to examine what would happen in an effectively competitive market. Consider a multiproduct firm earning a normal economic profit from services in two competitive markets. Profit maximization implies that the firm will price its services so that its margin (incremental revenue less incremental cost) is the same for both services; otherwise profits could be

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[3] Petition at 12-13.

increased by supplying less of one service and more of the other. If the price of Sunday calling is less than weekday calling in equilibrium, it is because the incremental cost of Sunday calling is less than that of weekday calling. Suppose, then, that the ILEC reduces access charges by one cent, which reduces MCI's marginal cost by one cent. Suppose also that MCI responds by changing no prices but, over time, enough MCI customers migrate from weekday calling to Sunday calling so that MCI's ARPM falls by one cent. Would that reduction in ARPM be all the pass-through that would occur in a competitive market?

7. No. In equilibrium, migration of customers from high-priced services to low-priced services has no effect on the amount of pass-through to output prices that would occur in a competitive market. Suppose both high-priced and low-priced markets are competitive, and the IXC earns normal profits in each. As customers shift over time to Sunday calling, the IXC's costs fall, because it costs less to call off-peak on Sunday: the lower cost of Sunday calling explains why equilibrium prices for Sunday calling were lower than weekday prices. If the market is competitive, the IXC's price must fall as its costs fall or else the shift in demand would lead to supra-normal profits, additional entry and a lower market price. If, in addition, access charges fell by a penny, then the market price would fall by that penny plus the amount by which the shift in demand caused incremental costs to fall plus the amount by which the stimulation of demand caused average costs to fall by more than marginal costs fell. Reductions in ARPM through shifts in demand are independent of the additional market price reductions that competitive forces would force to pass through access charge reductions. Even where there is no reduction in cost as a result of a shift in demand toward lower priced services (for example when customers move from basic rates to a discount plan), it is not consistent with a competitive market to suggest that a shift in demand, which is independent of access charge reductions, somehow can serve as a flow-through for those reductions.

8. Second, it is disingenuous to imply that the creation of new product offerings by MCI in 1997 was due to access reform and would not have taken place absent such reform. There are many factors, apart from a reduction in access charges, that would compel an IXC to introduce new product offerings such as 5 Cents Sunday. As MCI states, 5 Cents Sunday is an effort for

"increased call volume, sales productivity and customer retention levels."[4] Given MCI's stated motivations for introduction of this promotion, to attribute such plans to a pass-through of access charges is a misrepresentation of the facts.

The basic economic point that eludes MCI is that in a competitive market, a reduction in marginal costs results in lower output prices than otherwise would be the case. If other costs are falling in the industry, market price will fall, and an additional reduction in marginal cost—e.g., from a reduction in access charges—will give rise to an additional reduction in market price. Similarly, if demand is shifting towards less expensive products or services, ARPM will fall, but a reduction in marginal cost would cause an additional reduction in market price and in ARPM.

B. MCI's numerical support is fundamentally flawed.

9. The MCI Petition includes a table that purports to show that, while it has increased flat-rate (PICC) charges to its customers, those increases will be more than offset by reductions in per-minute long distance prices.[5] Specifically, it claims:

> ...for customers with calling in excess of about 60 minutes a month, the decline in per-minute rates will more than offset the pass through of the PICC.[6]

Furthermore, MCI asserts that its rates have come down for basic rate customers as well as for customers on calling plans such as MCI One. MCI's table and the conclusions reached from it are misleading and fundamentally flawed for a number of reasons.

10. First, assuming the numbers are correct, the chart is dead wrong because it compares apples and oranges. It compares the relatively small net change in access charges, from December 31,

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[4] MCI Corporate Release, "MCI Quarterly Revenue Tops $5 Billion for First Time," released January 28, 1998.

[5] Petition at 12.

[6] *Ibid.*

1997 to January 1, 1998, with MCI's change in long distance prices, from January 1, 1997 to January 1, 1998, and shows that high-volume customers' bills would be lower on 1/1/98 (including the PICC) than they were on 1/1/97. What the chart fails to account for is that *ILECs reduced carrier access charges over the course of 1997 by $1.7 billion or about 0.78 cents per minute.*[7] A customer that just broke even on this chart (i.e., that had "Savings" of $0) would have received none of the access charge reductions in July 1997.[8] While that may constitute zero savings in MCI's mind, it actually amounts to a considerable loss relative to what the consumer would have a right to expect in an effectively competitive market in which access charge reductions were passed through to consumers.

C. MCI is likely to substantially benefit from access reform.

11. For MCI, a conservative estimate of the new PICC and Universal Service Fund (USF) charges results in additional annual revenues of $527 million.[9] According to MCI, its new PICC and USF charges do not fully recover its expected increase in PICC and USF expenses. According to MCI's undocumented estimate, its own increased annual expense from PICC and USF charges amounts to $960 million ($360 and $600 million, respectively).[10]

12. Likewise, using MCI figures, an estimate of the amount by which MCI's access charges were reduced is approximately $852 million.[11] Taking into account MCI's share of the old high

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[7] USTA letter from Roy Neel to Chairman William E. Kennard, February 11, 1998 ("Roy Neel letter").

[8] To see this, note that a customer with 56.3 minutes per month just breaks even in MCI's Table; its usage charge falls by 1.9 cents per minute while its flat rate charge increases by $1.07 per month. Thus, this breakeven customer's bill is the same on January 1, 1998 as it was on January 1, 1997. But it should not have been the same. On July 1, 1997, access charges fell by 0.78 cents per minute; if MCI had passed this access charge reduction through in its usage price, its usage price would have fallen by at least 0.78 cents per minute. Thus, the Table overstates the MCI usage price reduction by at least 0.78 cents per minute, which amounts to at least 43.9 cents per month for the so-called breakeven customer.

[9] Calculations based on the recovery mechanisms MCI specifies in the attachment to the Sallet letter at 19. According to MCI, USF and PICC recovery for the 1st half of 1998 will amount to $321 million. (Sallet letter, attachment at 20)

[10] *Ibid.* at 20.

[11] *Ibid.* at 10. This figure is arrived at by rebasing the 1997 access reductions to measure the effect of 1/1/98 changes.

cost fund and its new trunking charges, Table 1 below summarizes the effect on MCI's profits from the various changes on January 1, 1998.[12] Since we have found no evidence that MCI changed per-minute toll rates on or after that date, I have entered $0 for the change in toll rates. The analysis indicates that MCI will over-recover approximately $579 million as a result of the changes that occurred on January 1, 1998.

Table 1
January 1, 1998, Impact on MCI (Millions)

	PICC & USF	*1/98 Access*	*1/1/98 Change in Toll Price*	*Trunking*	*Old HCF*	*Total*
Revenue	+$527	-	-	-	-	+$527
Cost	+$960	-$852	-	+$14	-$174	-$52
Net Effect	-$433	+$852	-	-$14	+$174	+$579

III. LONG DISTANCE PRICES HAVE RISEN RELATIVE TO ACCESS CHARGES.

13. When the question arises whether the IXCs have flowed through historical access charge reductions to consumers, they have responded in one of three ways: (1) They assert, without statistical support, that they have. (2) They report figures apparently showing that their ARPM has declined by more than their reductions in access charges, but, in doing so, they combine business and consumer revenues. (3) They report changes in rates that are available to consumers, without reporting to what extent consumers pay such rates.

[12] The industry total for the old high cost fund and total trunking cost increases were estimated to be $993 and $80 million respectively. We calculated MCI's shares by applying MCI's share of long distance revenues.

14. In its Petition, MCI uses technique (1), and the declaration by Professor Hall, which it footnotes,[13] uses technique (2) and (3). What MCI (or any other IXC) has consistently failed to provide are the data that would answer the question—the change in rates paid by consumers. NERA has done considerable analysis of AT&T's rate increases borne by consumers and the relationship among AT&T, MCI and Sprint's rates. The next section presents our findings.

A. AT&T and MCI increased rates relative to access charges.

15. Much of our analysis of the relationship between access charge reductions and long distance prices has focused on an analysis of data relating to the prices charged by AT&T, in large part because it is the market leader. Because the pricing of MCI and the other major long distance carriers largely parallels the pricing of AT&T, it is highly likely that the general relationship observed with respect to AT&T holds equally true with respect to MCI.

16. In fact, while NERA has not yet developed analysis of MCI's and Sprint's increases in residential toll rates that are as detailed as those for AT&T, there are at least two reasons that their rate changes net of access changes necessarily would have roughly paralleled those of AT&T. First, the Big Three have changed rates in lock step. Usually, AT&T has raised rates relative to access charges, then the other two have followed.[14] Although the percentage changes

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[13] Petition at 11, fn. 24, referring to Declaration of Robert E. Hall, In the Matter of Applications of WorldCom Inc for Transfers of Control of MCI Communications Corporation, CC Docket No. 97-211, January 26, 1998.

[14] The FCC has explicitly recognized this pattern of lockstep rate changes by the Big Three:

> *... the record demonstrates that, since 1991, basic schedule rates for domestic residential service have risen approximately sixteen percent (in nominal terms), with much of the increase occurring since January 1, 1994. Moreover, each time AT&T has increased its basic rate, MCI and Sprint have quickly thereafter matched the increase. In addition, studies in the record, including one submitted on behalf of AT&T, suggest that, if price cap regulation is removed for Basket 1 services, basic residential rates will rise even further.* n216 [n216 See, e.g., AT&T April 24, 1995 Ex Parte Filing, Attachment G, Affidavit of B. Douglas Bernheim and Robert D. Willig at 139.]
>
> ... each time that AT&T raised its basic rates, MCI and Sprint quickly matched the increase. Thus, to the extent that prices would rise if the Basket 1 price cap were removed, this is not evidence of AT&T's individual market power, but perhaps of tacit price coordination.

Order, Motion of AT&T Corp. to be Reclassified as a Non-Dominant Carrier, FCC 95-427, Adopted: October 12, 1995, Released: October 23, 1995. ¶ 81-82, emphasis added. Recent events show that the FCC's concerns were, and still are, justified. Shortly after AT&T was granted non-dominant carrier status, the IXCs took up where they

(continued...)

might have differed slightly among the Big Three in each instance, none of them took a pass. Second, Sprint's market share reached a plateau in 1991, and MCI's reached a plateau in 1993. If they were decreasing their rates relative to those of AT&T over time, then one would have expected their market shares to be growing.

17. During the 1990s, the major long distance carriers uniformly have failed to pass through fully the significant reductions in access charges that have occurred during this period. The data for AT&T is illustrative. AT&T raised its domestic interstate residential basic rates by 24 percent from 1991 to 1998,[15] even though average access charges for the interexchange carriers fell by 35 percent in that period.[16] AT&T's costs other than access have presumably been

(...continued)
left off, raising residential rates in 1996 almost simultaneously. On February 16, 1996, AT&T announced new tariffs for basic residential toll service that raised the "average customer's monthly bill by about 40 cents."[14] On February 20 and 21, Sprint and MCI followed. ("AT&T Increases Basic Rates, Extends Discount Plans," *Telecommunications Reports*, February 26, 1996, p. 27; "MCI, Sprint Follow AT&T's Lead, Raise Rates," *Telecommunications Reports*, March 4, 1996, p. 36.)

[15] In 1994, AT&T raised rates twice. The first increase was 6.3 percent in January 1994 ("AT&T Proposes $750 Million Rate Hike, New Calling Plan Aimed at High-Volume Residential Users," *Telecommunications Reports* (January 3, 1994)). The second increase was 3.7 percent in December 1994 ("AT&T and Rivals Boost Rates Further," *Wall Street Journal* (November 29, 1994), p. A3). In 1995 the FCC reported, "... the record demonstrates that, since 1991, basic schedule rates for domestic residential service have risen approximately sixteen percent (in nominal terms), with much of the increase occurring since January 1, 1994." (Federal Communications Commission, Order, *Motion of AT&T Corp. to Be Reclassified as a Non-Dominant Carrier*, FCC 95-427, Adopted October 12, 1995, Released October 23, 1995, ¶ 83, p. 37.) Therefore, I deduce that AT&T increased rates by 1.16/(1.063*1.037)-1 = 0.05 from 1991 through 1993. AT&T raised basic rates by a further 4.3 percent in February 1996 ("AT&T to Raise Basic Prices an Average 40c a Month," *Bloomberg News Services* (February 16, 1996). See also "AT&T Increases Basic Rates, Extends Discount Plans," *Telecommunications Reports* (February 26, 1996), p. 27); and 5.9 percent in December 1996 ("AT&T Follows MCI, Sprint with Long Distance Rate Increases," *Telecommunications Reports* (December 2, 1996)). PNR and Associates' "Bill Harvesting III," Release 2 (May 1997), provides a representative set of direct-dialed and calling-card toll calls from 1996. That fixed set of calls was priced out using the AT&T tariffs for December 1, 1996, July 2, 1997, and November 8, 1997. Based on these calculations, AT&T reduced rates by 5.8 percent on July 2, 1997, but raised them by 2.7 percent on November 8, 1997. It did not reduce per-minute basic rates in 1998 in response to the local exchange carriers' reductions in per-minute access charges. The cumulative increase from 1991 to 1998 was 1.05*1.063*1.037*1.043*1.059*(1-0.058)*1.027-1 = 0.24.

[16] From 1991 to 1998, average switched access charges fell from 6.97 cents to 4.92 cents per conversation minute. (Industry Analysis Division, Common Carrier Bureau, Federal Communications Commission, *Trends in Telephone Service* (February 1998), Table 1.2.) However, the figure of 4.92 cents includes the PICC. Expressed in per-minute terms, the PICC component was 0.41 cents. (John Scott, FCC staff) Subtracting the PICC component, the average switched access charge on 1/1/98 was 4.51 cents per conversation minute. 4.51/6.97-1 = -0.35.

declining as well.[17] Net of access charges, AT&T raised basic rates by 73 percent.[18] AT&T even raised basic rates from December 1996 to 1998: although the local exchange carriers reduced access charges by 1.53 cents per conversation minute,[19] AT&T reduced basic rates by only 0.65 cents per minute.[20] Merrill Lynch confirms that AT&T did not pass even through all of the July 1997 access charge reductions:[21]

> We estimate AT&T received a total annualized access cut of $800M, on July 1. About $400M was passed through to business customers in rate cuts beginning last December (in anticipation of the July 1 order). AT&T had assured the FCC that the remaining $400M would be passed through to consumers in the form of basic rate reductions. However, we estimate that only $65M (annualized to $250M) was passed on to consumers in 3Q. The result was higher consumer prices and AT&T profits, which we expect will continue into both 4Q and '98.

If the long-distance market were truly competitive, the incumbent interexchange carriers instead would have passed through to consumers the reductions in both access and nonaccess costs.

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[17] In its price cap filing before the FCC, AT&T reported data showing that, from 1985 to 1991, it reduced its capital costs relative to output by 2.1 percent per year, and it reduced its non-capital costs by 7.3 percent per year. (R. Schmalensee and J. Rohlfs, "Productivity Gains Resulting from Interstate Price Caps for AT&T," report filed by AT&T in CC Docket No. 92-134 (July 1992). The cost reductions I report here are in real terms.) Subsequently, AT&T reported that it continued to improve productivity: "Total cost of telecommunications services declined [in 1993 and 1994] despite higher volumes, *in part* because of reduced prices for connecting customers through local networks. *In addition, we improved our efficiency in network operations, engineering and operator services.* With lower costs and higher revenues, the gross margin percentage rose to 41.8% in 1994 from 39.0% in 1993 and 37.2% in 1992." (AT&T 1994 Annual Report, p. 24, emphasis added.) After 1994, AT&T stopped reporting such detail about its long distance operations, but there is no evidence of any reversal in the long-term trend in cost reductions after 1994.

[18] Based on NERA's calculations, the average domestic interstate residential basic rate is currently $0.191 per minute. (We applied AT&T's November 8, 1997, tariff to the representative set of toll calls from "Bill Harvesting III," *Op. Cit.*) The average rate in 1991 should therefore have been $0.191/1.24 = $0.154. The change in basic rates net of access charges was then $0.0451)/($0.154-$0.0697)-1 = 0.73.

[19] $0.0604 – $0.0451 = $0.0153. *Trends in Telephone Service*, *op. cit.*, and subtracting off the PICC component of $0.0041 for January 1, 1998.

[20] Based on AT&T's tariffs and on calling data for AT&T customers in the U.S. from PNR and Associates' "Bill Harvesting III, *Op. Cit.*

[21] Merrill Lynch, "AT&T Corp. 3d Quarter Review" (October 21, 1997), p. 2.

18. The long distance carriers increases in interstate basic rates affected most of their residential customers. In 1996, for example, 66 percent of AT&T's residential customers faced full basic rates.[22] These customers include two groups—those who subscribe to no calling plan and those who subscribe to a calling plan but whose toll usage is insufficient to generate any discount.

19. Some customers do subscribe to discount calling plans and pay less than basic rates. It is even true that the percentage of the interexchange carriers' customers subscribing to calling plans has increased since 1991, so the average percentage discount received by residential customers as a whole has increased since then. But, even taking account of the increase in the average discount, the rates paid by the average residential customer have increased since 1991. For example, the average discount off basic rates on a dollar of residential AT&T toll calls in 1996 was only about 13.9 percent.[23] I also assume that the average discount was the same in 1997 as it was in 1996.[24] To construct an extreme hypothetical illustration, suppose that no AT&T customer had a discount-calling plan in 1991. Under that extreme assumption, AT&T residential customers would have paid an average rate that was seven percent higher in 1997 than it was in 1991.[25] Contrary to that extreme illustration, however, according to Yankee Group national surveys, 20.5 percent of AT&T households had a calling plan in 1992,[26] and the percentage had increased to only 35.8 percent in 1997.[27] I assume that the percentage of

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[22] Based on calculations using "Bill Harvesting III," *Op. Cit.*. We used weights to make the "Bill Harvesting" sample representative of U.S. households. Thus, Professor Hall's criticism of the "Bill Harvesting" database we use here is incorrect. (Robert E. Hall, declaration on behalf of MCI, *In the Matter of Applications of WorldCom., Inc., for Transfers of Control of MCI Communications Corporation*, CC Docket No. 97-211 (January 26, 1998), ¶¶ 51-53, 106, 119, 122.)

[23] Based on calculations using "Bill Harvesting III," *Op. Cit.*

[24] Although AT&T introduced its One Rate calling plans in 1997, the percentage of its customers with calling plans declined from 38.4 percent in 1996 to 35.8 percent in 1997. (The Yankee Group, "1996 TAF Survey: Implications for Convergence" (December 1996), Table 307, p. 717; and The Yankee Group, "The Technologically Advanced Family" (October 27, 1997), Table 317, p. 477.) Thus, it is not clear that the average discount rose in 1997.

[25] 1.24*(1-0.139) = 0.068.

[26] The Yankee Group, "The Technologically Advanced Family Tracking Study—1992," Table 303.

[27] The Yankee Group, "The Technologically Advanced Family" (October 27, 1997), Table 317, p. 477.